

What is claimed is:

1 1. A structured image data processing method that processes data including (i)
 2 structured image data composed of document-image data and corresponding
 3 positioning data, and (ii) region data indicating a structure of the document-image
 4 data, the processing method comprising the steps of:

5 a) determining a region to be divided of the document-image data according
 6 to predetermined dividing information;

7 b) dividing the document-image data into plural portions according to the
 8 region to be divided;

9 c) processing individually the portions of the document-image data; and

10 d) renewing the structured image data by replacing the positioning data and
 11 the document-image data before processing with positioning data and document-
 12 image data after processing.

1 2. The structured image data processing method of claim 1, wherein the
 2 dividing information includes data that affect a difference between the document-
 3 image data after a color-reducing process and the document-image data before the
 4 color-reducing process so that the difference is smaller than a predetermined value.

1 3. The structured image data processing method of claim 1, wherein the
 2 dividing information includes score data added to at least one of the positioning
 3 data and the region data.

1 4. The structured image data processing method of claim 1, wherein the
 2 dividing information includes (i) score data, (ii) a transmit capacity of a
 3 transmitting path for transmitting the structured image data, and (iii) an user's
 4 request, which are added to at least one of the positioning data and the region data

1 5. A structured image data processing method that processes data including (i)
 2 structured image data composed of document-image data and corresponding
 3 positioning data, (ii) region data indicating a structure of the document-image data,
 4 and (iii) replaced media dividing information added to the region data, the
 5 processing method comprising the steps of:

6 a) determining a region to be divided of the document-image data according
 7 to the region to be divided;

10 c) replacing the document-image data divided according to the replaced
11 media dividing information that is added to the region data corresponding to the
12 divided document image; and

1 6. The structured image data processing method of claim 5, wherein the
2 replaced media dividing information is formed by text data added to a region.

9 a) determining a region to be divided of the first input data as a region to be
10 renewed, referring to the second input data;

13 c) renewing the divided structured image data of the first input data; and

8. A structured image data processing method that processes data including first input data composed of (i) first structured image data containing first document-image data and first positioning data, (ii) first region data indicating a structure of the first document-image data by regions, and (iii) first score data added to at least one of the first positioning data and the first region data; and second input data composed of (i) second structured image data containing second document-image data and second positioning data, (ii) second region data

16 d) combining the renewed first structured image data with the second
17 structured image data, using the first and the second score data.

11 d) structured image renewal means for renewing the structured image data
12 by replacing the positioning data and the document-image data before processing
13 with positioning data and document-image data after processing.

1 11. The apparatus for the structured image data processing of claim 9, wherein
2 dividing information includes score data added to at least one of the positioning

1 12. The apparatus for the structured image data processing of claim 9, wherein
2 the dividing information includes (i) score data, (ii) a transmit capacity of a
3 transmitting path for transmitting the structured image data, and (iii) an user's
4 request, which are added to at least one of the positioning data and the region data.

6 a) divided region determining means for determining a region to be divided
7 of the document-image data according to the replaced media dividing information;

10 c) replacing means for replacing the divided document-image data with the
11 replaced media dividing information that is added to the region data corresponding
12 to the divided document image; and

1 14. The apparatus for the structured image data processing of claim 13,
2 wherein the replaced media dividing information is formed by text data added to a
3 region.

1 15. An apparatus for a structured image data processing that processes data
2 including first input data composed of (i) first structured image data containing
3 first document-image data and corresponding positioning data, and (ii) first region
4 data indicating a structure of the first document-image data by regions; and second
5 input data composed of (i) second structured image data containing second
6 document-image data and corresponding positioning data, and (ii) second region
7 data indicating a structure of the second document-image data by regions, the
8 apparatus comprising:

9 a) divided region determining means for determining a region to be divided
10 of the first input data as a region to be renewed, referring to the second input data;

11 b) image-dividing means for dividing the first document-image data into
12 plural portions according to the region to be divided;

13 c) structured image data renewal means for renewing the divided structured
14 image data of the first input data; and

15 d) structured image data composition means for combining the renewed first
16 structured image data with the second structured image data.

1 16. An apparatus for a structured image data processing that processes data
2 including first input data composed of (i) first structured image data containing
3 first document-image data and first positioning data, (ii) first region data indicating
4 a structure of the first document-image data by regions, and (iii) first score data
5 added to at least one of the first positioning data and the first region data; and
6 second input data composed of (i) second structured image data containing second
7 document-image data and second positioning data, (ii) second region data
8 indicating a structure of the second document-image data by regions, and (iii)
9 second score data added to at least one of the second positioning data and the
10 second region data, the apparatus comprising:

11 a) score-attached divided region determining means for determining a score-
12 attached region to be divided of the first input data as a region to be renewed,
13 referring to the second input data;

14 b) image-dividing means for dividing the first document-image data into
15 plural portions according to the region to be divided;

16 c) structured image data renewal means for renewing the divided structured
17 image data of the first input data; and

18 d) score-attached structured image data composition means for combining
19 the renewed first structured image data with the second structured image data,
20 using the first and the second score data.

1 17. A computer program product for a structured image data processing that
2 processes data including (i) structured image data composed of document-image
3 data and corresponding positioning data, and (ii) region data indicating an inner

4 structure of the document-image data, the program product comprising:

5 a) a program code for determining a region to be divided of the document-
6 image data according to predetermined dividing information;

7 b) a program code for dividing the document-image data into plural portions
8 according to the region to be divided;

9 c) a program code for processing individually the portions of the document-
10 image data; and

11 d) a program code for renewing the structured image data by replacing the
12 positioning data and the document-image data before processing with positioning
13 data and document-image data after processing.

1 18. The computer program product for the structured image data processing of
2 claim 17, wherein the dividing information includes data that affect a difference
3 between the document-image data after a color-reducing process and the
4 document-image data before the color-reducing process so that the difference is
5 smaller than a predetermined value.

1 19. The computer program product for the structured image data processing of
2 claim 17, wherein the dividing information includes score data added to at least
3 one of the positioning data and the region data.

1 20. The computer program product for the structured image data processing of
2 claim 17, wherein the dividing information includes (i) score data, (ii) a transmit
3 capacity of a transmitting path for transmitting the structured image data, and (iii)
4 an user's request, which are added to at least one of the positioning data and the
5 region data.

1 21. A computer program product for a structured image data processing that
2 processes data including (i) structured image data composed of document-image
3 data and corresponding positioning data, (ii) region data indicating an inner
4 structure of the document-image data, and (iii) replaced media dividing
5 information added to the region data, the program product comprising:

6 a) a program code for determining a region to be divided of the document-
7 image data according to the replaced media dividing information;

8 b) a program code for dividing the document-image data into plural portions

9 according to the region to be divided;

10 c) a program code for replacing the divided document-image data with the
11 replaced media dividing information added to the region data corresponding to the
12 divided document image; and

13 d) a program code for renewing the structured image data by replacing the
14 positioning data, the document-image data, and the replaced media dividing
15 information.

1 22. The computer program product for the structured image data processing of
2 claim 21, wherein the replaced media dividing information is formed by text data
3 added to a region.

1 23. A computer program product for a structured image data processing that
2 processes data including first input data composed of (i) first structured image data
3 containing first document-image data and corresponding positioning data, and (ii)
4 first region data indicating a structure of the first document-image data by regions;
5 and second input data composed of (i) second structured image data containing
6 second document-image data and corresponding positioning data, and (ii) second
7 region data indicating a structure of the second document-image data by regions,
8 the program product comprising:

9 a) a program code for determining a region to be divided of the first input
10 data as a region to be renewed, referring to the second input data;

11 b) a program code for dividing the first document-image data into plural
12 portions according to the region to be divided;

13 c) a program code for renewing the divided structured image data of the first
14 input data; and

15 d) a program code for combining the renewed first structured image data
16 with the second structured image data.

1 24. A computer program product for a structured image data processing that
2 processes data including first input data composed of (i) first structured image data
3 containing first document-image data and first positioning data, (ii) first region
4 data indicating a data structure of the first document-image data by regions, and
5 (iii) first score data added to at least one of the first positioning data and the first

11 a) a program code for determining a region to be divided of the first input
12 data as a region to be renewed, referring to the second input data;

15 c) a program code for renewing the divided structured image data of the first
16 input data; and

17 d) a program code for combining the renewed first structured image data
18 with the second structured image data, using the first and the second score data.